



FIG. 1

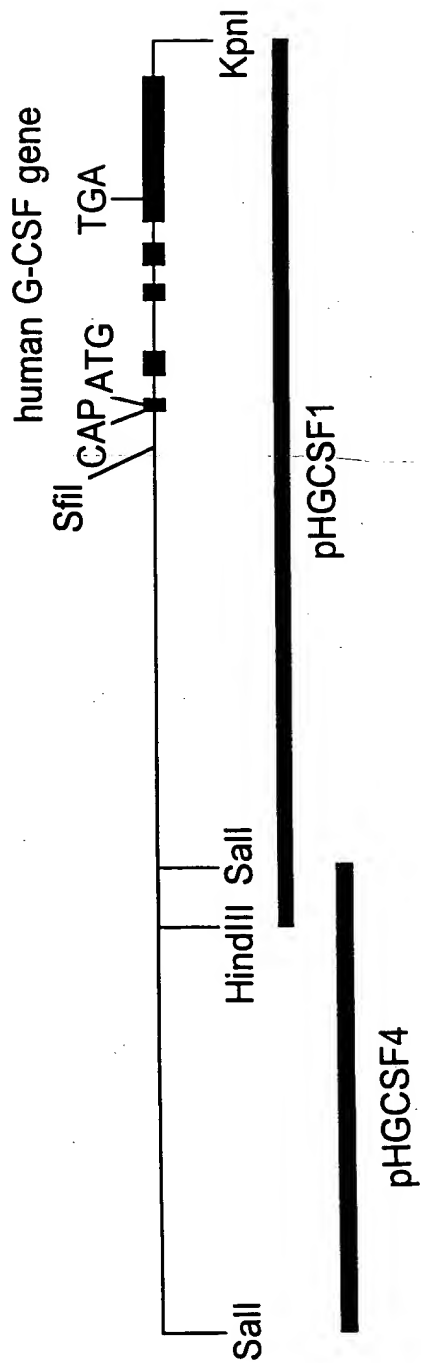


FIG. 2

Sall (-6596)
-6597 GTGACCTGC AGGTCAACGG ATCACTTCAG GACAGTAGTT CAAGACCAGC CTGGGCAGCA TAGGGAGACT GTCTCTACGA AAAATCAAAA AATTATGGCC
-6497 GGGCATGGTG GCTCAGTCT GTAATCCCTG AACTTTGGGA CATCAAGGCA AGTGGATCAC GTGAGGTTCAG GACTTCGAGA CTAGCTTGGC CAACATGGTG
-6397 AAACCTATC TCCACTAAA AATACAAAAA TTAGCCAGGC GATCACACCA TAGTCTCAGC GCAACAGAGA GAGACCTGT CTCTAAAAA ATATAATAA TGAACCTGGG GCAGTCAAGG AATCACTTGA
-6297 ACCCAGGAG CCGAGGTTC AGTGAGCTGA AGTGAAGTCA GATCAGCTCA TACTCAGGAG GCTGAGGTGG GCTGAGGTGG CAGAGCAAGA CTCTATCTCA AAAAAAATAA AAAAAATAAA
-6197 AATTAGCCA GGCATGGTAG TGCACACCTC TCCACACCTC TCCACACCTC TACTCAGGAG GCTGAGGTGG GCTGAGGTGG GAGGATCACT TGAACCTGGG GCAGTCAAGG CTACAGTGAG
-6097 CCAAGATCAT GCCACTACAC TCCAGCCCTG GCAACAGAGA GAGACCTGT CTCTAAAAA ATATAATAA TGAACCTGGG GCTGAGGTGG GAGGATCACT TGAACCTGGG GCAGTCAAGG CTACAGTGAG
-5997 CTGGTCCATA CATACTACTA TGTATATAGT TTGCAAACTC AAAGATCCAG ATAGTCAATT TTTTATAGGT TTTTATAGGT TTTTATAGGT TTTTATAGGT TTTTATAGGT TTTTATAGGT
-5897 CTGCCCTGTC TTTCTAGCAC AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT AAAAGCAGCT
-5797 AATAATCTTT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT TTTTAAAAAT
-5697 GGTGGGCAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA TCACTTGAGA
-5597 TGCACACCTG TGATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG TGCATCCACAG
-5497 CCAGCCTGGG TGACAGAGTG AGACTTCGTC AGACTTCGTC AGACTTCGTC AGACTTCGTC AGACTTCGTC AGACTTCGTC AGACTTCGTC AGACTTCGTC AGACTTCGTC
-5397 TACTCCTGCT CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA CTGAGGCATA
-5297 GTTTTTTTTT TACAATCTAC AAGCTGCCAG CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA
-5197 GTGGAGGGG AAGCTGCCAG CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA CCCCCTCTAA
-5097 CCCCCTCTAG ATCACTGTGA CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC CTTCTGAGCC
-4997 TCTCCCCATG TGGGGCTGAA GTCTGGATG GTCTGGATG GTCTGGATG GTCTGGATG GTCTGGATG GTCTGGATG GTCTGGATG GTCTGGATG GTCTGGATG
-4897 GATGATCTAA CTGCAATCC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC
-4797 CACCAGTTGG TTGACAGGAT GAAATGACGA AGTCCCTTAC ACCTGTAAATC CCAGCACCTT CCAGCACCTT CCAGCACCTT CCAGCACCTT CCAGCACCTT CCAGCACCTT
SphI (-4693)
-4697 ACAGCATGCC GGCAGTCTCT ACAGCCCTCG TCCGCTCTCG GCGCCCTCTC TCCCTGGGCT TGGCACTTGA GGAGCCCTTC AGCCACCCG
-4597 TGCATGTGG GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT
SmaI (-4406)
-4497 GCGCACGGG CTTGGGGGCC AGCTGGAGTT CCGGGTGGG GTGGGCTTGG CCGGCCCCCG ACTCGGAGCA GCGGGCCAGC CCTGCCAGGC CCCGGGCAAT

FIG. 3A

-4397 GAGAGGCTTA GCACCCGGG CAGCGCTGC GGAGGTGTA CTGGGTGCC CAGCAGTGC AGCCCGCCG CGCTGTGCTC GCTCGATTTC TCACTGGGCC
 -4297 TTAGCAGCTT TCCCGGGGG CAGGGCTCG GACCTGCAG GACCTGCAG CCGCCATGCC TGAGCCTCC CTCCATGGG TCCTGTGCG CCCGAGCCTC CCGCAGCAGC
 -4197 ACCACCCCTT GCTCCACAG GCCAGTCCC GCGAGTCCG ATCGACCAAG CCAAGGCTGA GAAGTGGGG CCGACGGCAC CGGACTGGC AGGAGCTAC CCCTGCAGCC
 -4097 CTGGTGGGA ATCCACTGGG TGAAGCCAGC TGGGCTCCTG AGTCTGGTG AGACTGGAG AACCTTTATG TCTAGCTCAG GATCGTAAA TACACCAATC
 -3997 AGCACCCCTG GTCTAGCTCA GGTCTGTGA GGTCTGTGA ATGCACCAAT CTCTGATGG GCCTTGGAGA ACCTTTATGT CTAGCTCAGG
 -3897 GATTGTAAAT ACACCAATCG GCACCTCTGA TCTAGCTCAA GGTCTGTAAA CACACCAATC AGCACCCCTG CTCTAGCTCA GGTATGTGA ATGCACCAAT
 HindIII (-3722)
 -3797 CGACAGTCTG TATCTGGCTA CTTTCATGG CATCCGTGTG AAGAGACAC CAACACGGCT TTGTGTGAGC AATAAAGCTT CTATCACCTG GGTGCAGGTG
 -3697 GGCTGAGTCC GAAAAGAGAG TCAGCGAAG AGATAAGGGT GGGCCGTTT TATAGGATT TATAGGTAA GGTAGGTAA AGGAAATTA CAGTCAAAGG GGGTTGTTC
 -3597 TCTGGCCGG CAGGAGTGG GGTGGCAAG GTGCTCAGT GGGTGGCTT TTGAGCCAG ATGAGCCAGG AAAAGGACTT TCACAAGGTA ATGTCAATCA
 -3497 TTAAGGCAAG GACCCGCTT TTACACCTCT TTTGTGGTG AATGTCATCA GTTAAGTTT GGGCAGGGC ATATTCACTT CTTTGTGAT TCTTCAGTTA
 -3397 CTTCAGGCCA TCTGGCGGTA TATGTCAAG TATGTGCGA TTACAGGGGA TGCGATGGCT TGGCTTGGC TCAGAGGCTT GACAGCTACT CTGGTGGGC CTTGGAGAAT
 Sall (-3290)
 -3297 GTTGTGTG ACACCTCTGA TCTAGTTAAT CTAGTGGGA CTTGTGAGT AGCTCAGGA TTGTAAAGC ACCAATCAGC GCCCTGTCAA
 -3197 AACAGACCAC TCGGCTCTAC CAATCAGCAG GATGTGGTG GGGCCAGATA AGAGAATAA AGCAGGCTGC CCGAGCCAGC AGTGGCAACC GCACAGGTCC
 -3097 CTATCCACAA TATGGCAGCT TTGTCTCTTT GCTGTTTGG ATAAATCTTG CTAATCTCTG CCGGAGGAA GAACAACCTC CCTTAAAGAG TATAACACTC
 -2997 CCACGAAGGT CTGCAGCTT ACTCCTGAAG CCACCTAAGC CACGAGCCCA CACGAACCCA CCAGAAGGA GAACCTGCGA ACACATCTGA CACCAGTTTC GAACAACACTC
 -2897 ACCGGGAAGG TCTGCAGCTT CACTCCTCAG CACTGCGAG CACTGCGAG GTCGCGGCT TCTTCTTGA AGTCAAGTGA ACCAAGCCT ACCAGTTTC GGACACAAGC
 -2797 CAGATGCACC ACCTTAAGAG CTGTAACACT CACTGCGAG GATGAATGC CCTCTCTGA AAAAATAA AAATTACAA AATTGGCGA GTCGGTGGT CCGTGGCTGT
 -2697 CCAGGAGTTT GAGATCAGC TGGGCAACAT GATGAATGC CACTCTCTGA AAAAATAA AAATTACAA AATTGGCGA GTCGGTGGT CCGTGGCTGT
 -2597 GGTCCAGCT ACGCGGAGG TAAAGTTGG AGGATCGCT GAGCCTGGG GGTGAAGCT GCAGTGAAGT GTGATTTGAC CACAGCCCTC TAGGCTGGG
 -2497 GACAGACTGA GACCCCTGTT CCCCCTCCGA AAAAATTTGA CAAAGTGA AATAGAGGT CCTGATATGG CTAGGTGACG TGGCTCATGC CTGTAATCCC
 -2397 AGCACTTTGG GAAGCCGAG CCGCGGGGTC ACCTAAGGTC AGGAGTGTGA GACCAGCCTG GCCAATATGG AGAAAGCCCA TCTCTTCTAA AATACAAAA
 SphI (-2269)
 -2297 TTAGCCGGCT GTGGGGGCG TGCTGGAGCA TGCTGTATAT CCCAGCTACT CAGGAGGCTG AGCGAGGAGA ATCATTGAA CCCAGGAGG GCGGTGTGA
 -2197 GTAGCCGAG ATCGTGCCAT TGCATCCAC CCACCTCCAG CTGGGCAACA AGAGCCAAAC TCTGCTTAA AAAAAAATAA AAGTGCCTG ACATATAAGA
 -2097 GGTGTGCAAT GCATAGTTGC CAGGCAACAT GTTTAAGAT GTGGAGCTCC TGCCCTCCAT GGTCCTGTTA AAAACCCACC CTCAGGCCA GGTGCAGTGG
 -1997 CTGATGCTTA TAATCCAGC ACTTTGGGAG GCGGAGGCG GTGGATCAAC TGAGGTGAG AGTTCGAGAC CAGCCTGACC ACCAATATGG TGAATCCCA

FIG. 3B

-1897 CCTCTACTAA AAATACAAAA TTAGATGAGC ATGGTGGTGC ATGCCTGTAA SphI (-1858) TCCACCTAC TGGAGGCTG AGCAGGAA- ATCACTAGAA CCAGGGAGGC
 -1797 GGAGGTTGTA GTGAGCCGAG ATCGTGCCAT TCCACTCCAG CCTGAGCAAT GAGCGAACT CCATCTCAA AAAACACA- CAAAACCCA CTCTCTACTC
 -1697 CAGGGAGCTG GGTACAGAGC TGGGCCACAT CAGTGC AAG TCGTGAGCCA CAGAGCTAAG GCGACGTGA GGACCGGA- CCAGATAACA GTGTGTGAGA
 -1597 TCAGTGTGTG AGATCAGAGC TCCCTGCCAT TCGTGAGCAG CAGGGGCC CCAAGCACA GAGATGGCC CATCCAGTCA CCACATCCAC TTCTCATCCA
 -1497 GAGATGTCTG TTCTTTGGCA CCTTGGGTA AATTAGGACA GAAGGTGACA GTCTTGGTG TGGTCACTCA GACTGCCCC GGCAGGCCCTT GTGGCTGTAG
 -1397 AAAAGTTCA GGCCTAGGC CGCTAGGC CGAGTGGCT CAGGCTGTGA ATCCAGCAC TTITGGAGGC CGAGCGGCT GGTACACGAG CTCAGGAGAT CGTGACCATC
 -1297 CTGGCTAACA CCGTGAAEC CCGTCTCTAC TAAAAATACA AAAAATGGC CGGCATGGT GCGGGCACC TGTAGTTCCA GCTACTCGG AGGCTGAGGC
 -1197 AGGAGAAATG GTGAACCCGA GAGGCAGAT TTGCAGTGAG CCGAGATCG GCCACTGAC TTACACTGAGC AAGACTCCAT CTGGAAGAAGA
 -1097 AAAAGAAAAC GTTCAGGTCT GAGCCAGAGG CCCAGGCTGT AATTCTGTCA CTTACCATGA CCTTGGCAA GGCACCTCT- TCCCTGGCCA GTTCACGGGG
 -997 TTGGAATCGA CTCCAAGGTC CCTTCCAGCA TTAACGCTGC ATGGTTCTAA GCCCTTGGGA CCTACTGTC AGGTCGTGC ACAGGAGGT GAAGTCCACT
 -897 TCAAGGTGAA TGACCAAGGA AGTCACGTGT CCAATCCCG CAGTTCCAAA TTCTCTTGGC TCTACCGGAT TCTAGGCT- TAGCCGAATG AGTCATGGG
 -797 TGAGCCAAATC GCGTCGAAGG GTCTTGCCCTC ATTCGGGACA GACATCCGCT TCACTCTTGG ATGGTGCCTA TCCAAGTGT GGTGGGCAC AGCAGCCAAG
 -697 GCGGGGGGTT TCTGGGGAGT TCCAGCTAA TCAACTTGGG CAGACAGCCT GGAATTTGG AGGTTTGG GTAGGAATGG GAGCAACCAG GCTTCTTTTT
 -597 ACCCAATGTC CTTATCTCAG GTAGGGGCTC AGGAGGTCTC CCAGACAGGC AGCTTCCGA GAGTTTGGG GTAGGAATGG GAGCAACCAG GCTTCTTTTT
 -497 TTCTCTCTTA GAATTTGGG GCTTGGGGA CAGGCTTGAG AATCCCAAAG GAGAGGGGA AAGGACACTC CCCCACAAG- CTGCCAGAGC GAGAGAGGGA
 SfiI (-297)
 -397 GACCCCGACT CAGCTGCCAC TTCCCCACAG GCCTCTGCCG CTTCCAGGCG TCTATCAGCG GCTCAGCCTT TGTTCAGCTG TTCTGTTCAA ACACCTCTGG
 -297 GCAATTCAGG CCTGGGTGG GACGGGGAGT GAAGGGAGTT TGAGGGGGGC, AAGGGGACGT CAAAGGAGGA TCAGAGATTC CACAATTCA CAAAACCTTC
 -197 GCAACAGCT TTTTGTTCCTA ACCCCCTGCTC AATTGCTTGG ACACCAAAT TGCATAAATC CTGGGAAGTT ATTACTAAGC CTTAGTGTG GCCCCAGGTA
 CAP (-34) ATG (1)
 -97 ATTTCCTCCC AGGCTCCAT GGGTTATGT ATAAAGGGCC CCTAGAGCT GGGCCGCCAA ACAGCCCGA GCCTGCAGCC CAGGCCACC CAGACCCATG
 1 Met
 intron 1 (41)
 4 GCTGGACCTG CCACCCAGAG CCCCATGAAG CTGATGGGTG AGTGTCTTGG CCCAGGATG (SEQ ID NO: 1)
 2 A1aGlyProA l aThrGlnSe rProMetLys LeuMet (SEQ ID NO: 2)

FIG. 3C

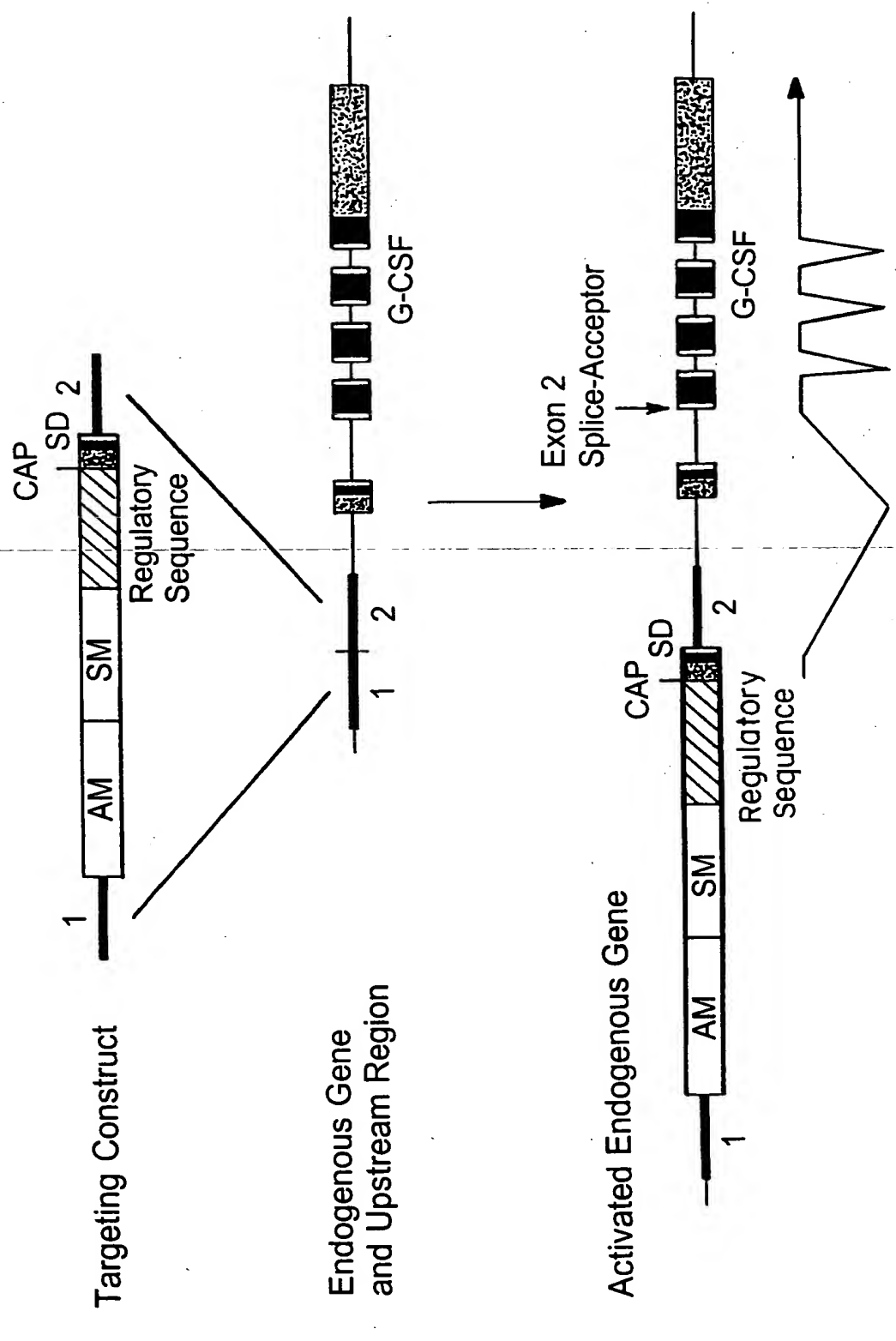


FIG. 4

GATCACTTGAGGACAGTAGTTCAAGACCAGCCTGGGCAGCATAGGGAGACTGTCTCTACGAAAAA
 TCAAAAAATTATGGCCGGGCATGGTGGCTCACGTCTGTAATCCCTGAACTTTGGGACATCAAGGC
 AAGTGGATCACTTGAGGTCAGGAGTTCGAGACTAGCCTGGCCAACATGGTGAAACCCTATCTCCA
 CTAAAAAATACAAAAATTAGCCAGGCATGGTGGCAGGCACCTGTAATCCCGGCTACTCAGGAGGC
 TGAGGCAGGAGAATCACTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCTGAGATCACACCACTGC
 ACTCCAGCCTGGGTGACAGAGCAAGACTCTATCTCAAAAAAATAAAAAAATAAAAAATTAGCC
 AGGCATGGTAGTGACACACCTCTAGTCTCAGCTACTCAGGAGGCTGAGGTGGGAGGATCACTTGAA
 CCTGGGGCAGTCAAGGCTACAGTGAGCCAAGATCATGCCACTACACTCCAGCCTGGGCAACAGAG
 AGAGACCCTGTCTCTAAAAAATAATAATAATAAAGAAAAAACAAGCTCTGTTTATGTCTCCTGG
 TCCATACATACTACTATGTATATAGTTTGCAAACTCAAAGATCCAGATAGTCAATTTTTTAGGCT
 TGTGGGCGGTATGGTCTCTGTCACAATCACTTGCCTGTCTTTCTAGCACAAAGCAGCTATAA
 ACAATACATACATGAATTTTTTATAGACATCGAGATTTGAATTTTATATGATTTTTTACATTTTAT
 AAAATAATCTTTTTTAAAAATTTTCCCCTAACCATTTAAAAAGTGTAAGAGCCGGCCAGGGCGCCAT
 CGTCACGCCTGTAATTCAGCACTTTGGGAGGCTGAGGTGGGCAGATCACTTGAGATCAACAGTT
 CGAGACCAGCCTGGCCAACATAGCAAAACCCCATTTCTACTAAAAAATAAAAAATTAGCTGGGCA
 TAGTGGTGACACACCTGTGATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGG
 GAAGCGGAGGTTGCAGTGAGCCAACATCATGCCACTGCACTCCAGCCTGGGTGACAGAGTGAGAC
 TTCGTCTCAACGAAAAAAAAAAGTGTAAGAGCCATTCTTAATTCAGTGATACATCAGTGATACATAC
 TEAGGTCTGCGTACTCCTGCTCTGAGGCATACCTGAGAAGTAGAGTTGCTTGGTCACAGGACATA
 CACATTTCCACATTAAGTAGACTACCAAGTTGCCATCCAAGGAGGTTTTTTTTTTTACAATCTA
 CACTCCCCCAGCAACAAATGAGAGTTACTCCAGATCCTTTACAAAGATGCTCTAAGCCCAGTAC
 CAGATGAAAAAGGAAGTGGGAGGGGAAGCTGCCAGCCCTTCTAACCATGAAGAAATACCTGGT
 AGAGCCTTCTGGATGCTGGAAGGATGAATAACGGGGGTCTCTGGAGCCTGCCCCCTGTGAGTCA
 CTGTGACTTCTGAGCCTCCAGTCCAGTCTCAGCCCCATGTGTGATGGCCAGTGATAATGAGCCCT
 CACTCTCTGTTTGGTCTTTATTCTCCCCATGTGGGGCTGAAGTCTGGATTGAGCCGTTATTCAAG
 ATGTACAGCTTTCTTGACAGGAAAGTAGTGTACAGAAACAGCAGGGGCTTGGCAAGATGATCTA
 ACTGCAAATCCTACCTGGCTCAGCCACCAGCTAGTTCTGTGATCTTGAACAAGTTTTTTTCACTTC
 TCTGAGGCCATCCCTTGGCTACAACACACCAGTTGGTTGACAGGATGAAATGACGAAGTCCCTTA
 CACCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGTGGATGGCTTGAGCCTGAGAGGTGACAG
 CATGCCGGCAGTCCCTCACAGCCCTCGTTGCTCTCGGCCCTCCTCTGCCTGGGCTCCCACTTCG
 GTGGCACTTGAGGAGCCCTTCAGCCCACCGCTGCACTGTGGGAGCCCTTTCTGGGCTGGCCAAG
 GCCAGAGCCGGCTCCCTCAGCTTGCAAGGAGGTGTGGAGGGAGAGGCTCAAGCAGGAACCGGGGC
 TGCGCACGGCGCTTGCGGGCCAGCTGGAAGTTCCGGGTGGGCGTGGGCTTGGCGGGCCCCGCACTC
 GGAGCAGCGGGCCAGCCCTGCCAGGCCCCGGGCAATGAGAGGCTTAGCACCCGGGCCAGCGGCTG
 CGGAGGGTGTACTGGGTGCCCCAGCAGTGCCAGCCCGCCGGCGCTGTGCTCGCTCGATTCTCAC
 TGGGCCTTAGCAGCCTTCCCGCGGGGCAGGGCTCGGGACCTGCAGCCCGCCATGCCTGAGCCTCC
 CCTCCATGGGCTCCTGTGCGGCCCCGAGCCTCCCCGACGAGCACCACCCCTGCTCCACAGCGCCC
 AGTCCCATCGACCACGCAAGGGCTGAGAAGTGCGGGCGCACGGCACCAGGACTGGCAGGCAGCTA
 CCCCTGCAGCCCTGGTGCGGAATCCACTGGGTGAAGCCAGCTGGGCTCCTGAGTCTGGTGGAGAC
 TTGGAGAACCTTTATGTCTAGCTCAGGATCGTAAATACACCAATCAGCACCCTGTGTCTAGCTC
 AGGGTCTGTGAATGCACCAATCCACACTCTGTATCTAGCTACTCTGATGGGGCCTTGGAGAACCT
 TTATGTCTAGCTCAGGGATTGTAATACACCAATCGGCACCTCTGTATCTAGCTCAAGGTTTGTAA

FIG. 5A

ACACACCAATCASCACCCTGTGTCTAGCTCAGGGTATGTGAATGCACCAATCGACAGTCTGTATC
 TGGCTACTTTTCATGGGCATCCGTGTGAAGAGACCACCAAACAGGCTTTGTGTGAGCAATAAAGCT
 TCTATCACCTGGGTGCAGGTGGGCTGAGTCCGAAAAGAGAGTCAGCGAAGGGAGATAAGGGTGGG
 GCCGTTTTATAGGATTTGGGTAGGTAAAGGAAAAATTACAGTCAAAGGGGGTTTTGTTCTCTGGCGG
 GCAGGAGTGGGGGGTCCGAAGGTGCTCAGTGGGGGTGCTTTTTGAGCCAGGATGAGCCAGGAAAA
 GGACTTTTACAAAGGTAATGTCATCAATTAAGGCAAGGACCCGCCATTTACACCTCTTTTGTGGTG
 GAATGTCATCAGTTAAGTTGGGCGAGGGCATATTCACTTCTTTTGTGATTCTTCAGTTACTTCAG
 GCCATCTGGGCGTATATGTGCAAGTTACAGGGGATGCGATGGCTTGGCTTGGGCTCAGAGGCTTG
 ACAGCTACTCTGGTGGGGCCTTGGAGAATGTTTGTGTGACACTCTGTATCTAGTTAATCTAGTG
 GGGACGTGGAGAACCTTTGTGTCTAGCTCAGGGATTGTAAACGCACCAATCAGCGCCCTGTCAAA
 ACAGACCACTCGGCTCTACCAATCAGCAGGATGTGGGTGGGGCCAGATAAGAGAATAAAAGCAGG
 CTGCCCCGAGCCAGCAGTGGCAACGCGCACAGGTCCCTATCCACAATATGGCAGCTTTGTTCTTTT
 GCTGTTTGGGATAAATCTTGCTACTGCTCGCTTTTTGGGTCCACACTGCTTTTTATGAGCTGTAAC
 ACTCACCACGAAGGTCTGCAGCTTCACTCCTGAAGCCACTAAGACCACGAGCCCACCGGGAGGAA
 TGAACAACCTCCGGCCGCGCTGCCTTAAGAGCTATAACACTCACCGCGAAGGTCTGCAGCTTCACT
 CCTCAGCCAGCGAGACCACGAACCCACCAGAAGGAAGAACTGCGAACACATCTGAACATCAGAA
 GGAACAACTCCAGATGCACCACCTTAAGAGCTGTAACTCACTGCGAGGGTCCGCGGCTTCCT
 TCTTGAAGTCAGTGAGACCAAGCACTCACCAGTTCGGACACAAGCCAGGAGTTTGAGATCAGC
 CTGGGCAACATGATGAAATGCCCTCTCTGCAAAAAAATAAATAAATAAATAAATAAATAAATAA
 GGTGGTCCGTGCTGTGGTCCAGCTACGCGGGAGGCTAAAGTGGGAGGATCGCTTGAGCCTGGG
 AGGTGAAGACTGCAGTGAGCTGTGATTGTACCACAGCCCTCTAGGCTGGGGGACAGACTGAGACC
 CTGTTTCCCTCCGCAAAAAAATTGACAAAAGTGTAATAAGAGGTGCCTGATATGGCTAGGCGCA
 GTGGCTCATGCCTGTAATCCAGCACTTTGGGAAGCCGAGGCGGGCGGGTCACTAAGGTGAGGA
 GTGTGAGACCAGCCTGGCCAACATGGAGAAAGCCCATCTCTTCTAAAAATAAAAAATTAGCCGGC
 TGTGGGGGAGTGGTGGAGCATGCCTGTAAATCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCA
 CTTGAACCCAGGAGGCGGCGGTTGCACTGAGCCGAGATCGTGCCATTGCACTCCACCCACTCCAG
 CCTGGGCAACAAGACCAAACTCTGTCTTAAAAAATAAATAAATAAATAAATAAATAAATAAATAA
 TGTGCAATGCAATAGTTGCCAGGCAACATGTTAAGAATGTGGAGCTCCTGCCTTCCATGTTCTCT
 GTTAAAAACCCACCCTCAAGGCCAGGTGCACTGCTATGCCTATAATCCAGCACTTTGGGAGG
 CCGAGGCGGGTGGATCACCTGAGGTGAGGAGTTCGAGACCAGCCTGACCACCAACATGGTGAAAT
 CCCACCTCTACTAAAAATAAAAAATTAGATGAGCATGGTGGTGCATGCCTGTAATCCACCTACT
 TGGGAGGCTGAGGCAGGAAAACTACTAGAACCAGGGAGGCGGAGGTTGTAGTGAGCCGAGATCGT
 GCCATTGCACTCCAGCCTGAGCAATGAGCGAACTCCATCTCAAAAAACAACAACAAAAACCCA
 CTCTCTACTCCCAGGGAGCTGGGTACAGAGCTGGGCCACATCAGTGCAAGGTGCTGAGCCACAGA
 GCTAAGGCGGAGCTGCAGGACCCGCGGACCAGATAACAGTGTGTGAGATCAGTGTGTGAGATCAGA
 CGTCCCTGCCATTGGTGACCAACAGGGGGCCCCCAAGCACCAGAGATGGCCCCATCCAGTCACCA
 CATCCACTTCTCATCCAGAGATGTCTGTTTCTTGGCAGCCTGGGGTAAATTAGGACAGAAGGTGA
 CAGTCTTGGGTGTGGTCAGTCAGACTGCCCCAGGCAGGCTTGTGGCCTGTAGAAAACGTTTCAAG
 CCTAGGCCGGGCACGGTGGCTCACGCTGTAAATCCAGCACTTTGGGAGGCGGAGGCGGGTGGAT
 CACGAGGTGAGGAGATCGTGACCATCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATAC
 AAAAAATTGGCCGGGCATGGTGGCGGGCACCTGTAGTTCAGCTACTCGGGAGGCTGAGGCAGGA
 GAATGGCGTGAAACCCGAGAGGCAGAGTTTGCAGTGAGCCGAGATCGCGCCACTGCACTCCAGCCT
 GGGCGACAGAGCAAGACTCCATCTGGAAGAGAAAAAGAAAAACGTTCAAGTCTGAGCCAGAGGCC
 AGGCTGTAATTCTGTCACTTACCATGACCTTGGGCAAGGCACTTCCCTCCCTGGCCCACTTCAGG
 GGGTTGGAATCGACTCCAAGGTCCCTTCCAGCATTACGCTGCATGGTTCTAAGATGAGAAGATG
 GGGCAGTTTCCCTCTCTCACCCAGCCCGTGTCCACTTCAAGGTGAATGACCAGGGAACTCAGG
 TGTCCCAATCCCGCAGTTCCAAAGCCCTTGGGGACCCCTACTGTGAGGGTCTGTGCACGAGGAGGTG
 AAGGTGAGGTGAGCCAAATCCCTCGAAGGGTCTTGCTCATTCGGGACAGACATCCGGTTTTCTCT
 TGGCTCTACCGGATTCTAGGGGCTTTAGCCGAATGAGTCATGGGGGGCGGGGGGGTTTTCTGGGG
 GAGTTCCCGAGCTAATCAACTTGGGACAGGACAGCCTGGAACCTTTCGATGGTGCCTATCCAAGTGT
 GGGGTGGGCACAGCAGCAAGACCAATGTCTTATCTCAGGTAGGGGCTCAGGAGGTCTCCAG
 ACAGGCAGCCTCCGGAGAGTTTGGGGGTAGGAATGCGGAGCAACCAGGCTTCTTTTTCTCTCTT
 AGAATTTGGGGGCTTGGGGGACAGGCTTGAAGATCCCAAGGAGAGGGGCAAGGACACTCCCCC
 ACAAGTCTGCCAGAGCGAGAGAGGAGACCCCGACTCAGCTGCCACTTCCCCACAGGCTT

FIG. 5B

CC GGCAGTCCTC

ACAGCCCTCG TTCGCTCTCG GCGCCTCCTC TGCCTGGGCT CCCACTTCGG TGGCACTTGA
 GGAGCCCTTC AGCCACCGC TGCCTGTGG GAGCCCTTT CTGGGCTGGC CAAGGCCAGA
 GCCGGCTCCC TCAGCTTGCA GGGAGGTGTG GAGGGAGAGG CTCAAGCAGG AACCGGGGCT
 GCGCACGGCG CTTGCGGGCC AGCTGGAGTT CCGGGTGGGC GTGGGCTTGG CGGGCCCCGC
 ACTCGGAGCA GCGGGCCAGC CCTGCCAGGC CCCGGGCAAT GAGAGGCTTA GCACCCGGGC
 CAGCGGCTGC GGAGGGTGTA CTGGGTGCCC CAGCAGTGCC AGCCCGCCGG CGCTGTGCTC
 GCTCGATTTT TCACTGGGCC TTAGCAGCCT TCCCGCGGGG CAGGGCTCGG GACCTGCAGC
 CCGCCATGCC TGAGCCTCCC CTCCATGGGC TCCTGTGCGG CCCGAGCCTC CCCGACGAGC
 ACCACCCCTT GCTCCACAGC GCCCAGTCCC ATCGACCACG CAAGGGCTGA GAAGTGCGGG
 CGCAGGGCAC CGGGA CTGGC AGGCAGCTAC CCCTGCAGCC CTGGTGCGGA ATCCACTGGG
 TGAAGCCAGC TGGGCTCCTG AGTCTGGTGG AGACTTGGAG AACCTTTATG TCTAGCTCAG
 GGATCGTAAA TACACCAATC AGCACCTGT GTCTAGCTCA GGGTCTGTGA ATGCACCAAT
 CCACACTCTG TATCTAGCTA CTCTGATGGG GCCTTGGAGA ACCTTTATGT CTAGCTCAGG
 GATTGTAAAT ACACCAATCG GCACTCTGTA TCTAGCTCAA GGTGTGTAAC CACACCAATC
 AGCACCTGT GTCTAGCTCA GGGTATGTGA ATGCACCAAT CGACAGTCTG TATCTGGCTA
 CTTTCATGGG CATCCGTGTG AAGAGACCAC CAAACAGGCT TTGTGTGAGC AATAAAGCTT
 CTATCACCTG GGTGCAGGTG GGCTGAGTCC GAAAAGAGAG TCAGCGAAGG GAGATAAGGG
 TGGGGCCGTT TTATAGGATT TGGGTAGGTA AAGGAAAATT ACAGTCAAAG GGGGTTTGT
 CTCTGGCGGG CAGGAGTGGG GGGTCGCAAG GTGCTCAGTG GGGGTGCTTT TTGAGCCAGG
 ATGAGCCAGG AAAAGGACTT TCACAAGGTA ATGTCATCAA TTAAGGCAAG GACCCGCCAT
 TTACACCTCT TTTGTGGTGG AATGTCATCA GTTAAGTTGG GGCAGGGCAT ATCACTTCT
 TTTGTGATTC TTCAGTTACT TCAGGCCATC TGGGCGTATA TGTGCAAGTT ACAGGGGATG
 CGATGGCTTG GCTTGGGCTC AGAGGCTTGA CAGCTACTCT GGTGGGGCCT TGGAGAATGT

Sall

TTGTGTCGAC ACTCTGTATC TAGTTAATCT AGTGGGGACG TGGAGAACCT TTGTGTCTAG
 CTCAGGGATT GTAAACGCAC CAATCAGCGC CCTGTCAAAA CAGACCACTC GGCTCTACCA
 ATCAGCAGGA TGTGGGTGGG GCCAGATAAG AGAATAAAAG CAGGCTGCCC GAGCCAGCAG
 TGGCAACGCG CACAGGTCCC TATCCACAAT ATGGCAGCTT TGTCTTTTG CTGTTTGCGA
 TAAATCTTGC TACTGCTCGC TTTTGGGTG CACACTGCTT TTATGAGCTG TAACACTCAC
 CACGAAGGTC TGCAGTTCA CTCCTGAAGC CACTAAGACC ACGAGCCAC CGGGAGGAAT
 GAACAACCTC GGCCGCGCTG CCTTAAGAGC TATAACACTC ACCGCGAAGG TCTGCAGCTT

FIG. 6A

09845020-042701

CACTCCTCAG CCAGCGAGAC CACGAACCCA CCAGAAGGAA GAAACTGCGA ACACATCTGA
ACATCAGAAG GAACAACTC CAGATGCACC ACCTTAAGAG CTGTAACACT CACTGCGAGG
GTCCGCGGCT TCCTTCTTGA AGTCAGTGAG ACCAAGCACT CACCAGTTTC GGACACAAGC
CCAGGAGTTT GAGATCAGCC TGGGCAACAT GATGAAATGC CCTCTCTGCA AAAAAAAAAA
AAATTACAAA AATTGGCGGA GCATGGTGGT CCGTGCCTGT GGTCCCAGCT ACGCGGGAGG
CTAAAGTGGG AGGATCGCTT GAGCCTGGGA GGTGAAGACT GCAGTGAGCT GTGATTGTAC
CACAGCCCTC TAGGCTGGGG GACAGACTGA GACCCTGTTT CCCCTCCGCA AAAAAATTGA
CAAAAGTGTA ATAAGAGGTG CCTGATATGG CTAGGCGCAG TGGCTCATGC CTGTAATCCC
AGCACTTTGG GAAGCCGAGG CGGGCGGGTC ACCTAAGGTC AGGAGTGTGA GACCAGCCTG
GCCAACATGG AGAAAGCCCA TCTCTTCTAA AAATACAAAA TTAGCCGGCT GTGGGGGCAG
TGGTGAGCA TGCCTGTAAT CCCAGCTACT CAGGAGGCTG AGGCAGGAGA ATCACTTGAA
CCCAGGAGGC GCGGTTGCA GTGAGCCGAG ATCGTGCCAT TGCACTCCAC CCACTCCAGC
CTGGGCAACA AGAGCCAAAC TCTGTCTTAA AAAAAAAAAA AAAAAGTGCC TGACATATAA
GAGGTGTGCA ATGCAATAGT TGCCAGGCAA CATGTTTAAG AATGTGGAGC TCCTGCCTTC
CATGGTCCTG TAAAAACCC ACCCTCAAGG CCAGGTGCAG TGGCTCATGC CTATAATCCC
AGCACTTTGG GAGGCCGAGG CGGGTGGATC ACCTGAGGTC AGGAGTTCGA GACCAGCCTG
ACCACCAACA TGGTGAAATC CCACCTCTAC TAAAAATACA AAATTAGATG AGCATGGTGG
TG

FIG. 6B

CCTG TAATCCCACC TACTTGGGAG GCTGAGGCAG GAAAATCACT AGAACCAGGG
 AGGCGGAGGT TGTAGTGAGC CGAGATCGTG CCATTGCACT CCAGCCTGAG CAATGAGCGA
 AACTCCATCT CAAAAAACA ACAACAAAA CCCACTCTCT ACTCCCAGGG AGCTGGGTAC
 AGAGCTGGGC CACATCAGTG CAAGGTGCTG AGCCACAGAG CTAAGGCGGA GCTGCAGGAC
 CGCGGACCAG ATAACAGTGT GTGAGATCAG TGTGTGAGAT CAGACGTCCC TGCCATTGGT
 GACCACCAGG GGGCCCCAA GCACCAGAGA TGGCCCCATC CAGTCACCAC ATCCACTTCT
 CATCCAGAGA TGTCTGTTTC TTGGCACGCT GGGGTAAATT AGGACAGAAG GTGACAGTCT
 -1457 TGGGTGTGGT CAGTCAGACT GCCCCAGGCA GGCCTTGTGG CCTGTAGAAA ACGTTCAGGC
 -1397 CTAGGCCGGG CACGGTGGCT CACGCCTGTA ATCCCAGCAC TTTGGGAGGC CGAGGCGGGT
 -1337 GGATCACGAG GTCAGGAGAT CGTGACCATC CTGGCTAACA CGGTGAAACC CCGTCTCTAC
 -1277 TAAAAATACA AAAAATTGGC CGGGCATGGT GCGGGGCACC TGTAGTTCCA GCTACTCGGG
 -1217 AGGCTGAGGC AGGAGAATGG CGTGAACCCG AGAGGCAGAG TTTGCAGTGA GCCGAGATCG
 -1157 CGCCACTGCA CTCCAGCCTG GGCGACAGAG CAAGACTCCA TCTGGAAAAG AAAAAGAAAA
 -1097 CGTTCAGGTC TGAGCCAGAG GCCCAGGCTG TAATTCTGTC ACTTACCATG ACCTTGGGCA
 -1037 AGGCACTTCC TTCCCTGGCC CAGTTCACGG GGTTGGAATC GACTCCAAGG TCCCTTCCAG
 -977 CATTAAAGCT GCATGGTTCT AAGATGAGAA GATGGGGCAG TTTCCCTCT CTCACCCAG
 -917 CCCGTGTCCA CTTCAAGGTG AATGACCAGG GAAGTCACGT GTCCCAATCC CGCAGTTCCA
 -857 AAGCCCTTGG GGACCCTACT GTCAGGGTCG TGCACGAGGA GGTGAAGGTC AGGTGAGCCA
 -797 ATCGCCTCGA AGGGTCTTGC CTCATTGGG ACAGACATCC GGTTTCTCT GGCTCTACCC
 -737 GGATTCTAGG GGCTTTAGCC GAATGAGTCA TGGGGGGCGG GGGGGTTTCT GGGGGAGTTC
 -677 CCAGCTAATC AACTTGGGAC AGGACAGCCT GGAACCTTCG ATGGTGCCTA TCCAAGTG

Xaml

FIG. 7